WE CLAIM:

1. A method of administering a glucagon-like peptide-1(GLP-1) molecule comprising, administering an effective amount of a GLP-1 molecule selected from the group consisting of GLP-1, GLP-1 analogs, or GLP-1 derivatives to a patient in need thereof by pulmonary means.

2. The method of **Claim 1**, wherein the GLP-1 molecule is delivered to lower airways of the patient.

3. The method of **Claim 2**, wherein the GLP-1 molecule is deposited in the alveoli.

4. The method of **Claim 1**, wherein the GLP-1 molecule is inhaled through the mouth of the patient.

5. The method of **Claim 1**, wherein the GLP-1 molecule is administered as a pharmaceutical formulation comprising the GLP-1 molecule in a pharmaceutically acceptable carrier.

6. The method of **Claim 5**, wherein the formulation is selected from the group consisting of a solution in an aqueous medium and a suspension in a non-aqueous medium.

7. The method of **Claim 6**, wherein the formulation is administered as an aerosol.

8. The method of **Claim 5**, wherein the formulation is in the form of a dry powder.

9. The method of **Claim 5**, wherein the GLP-1 molecule has a particle size of less than about 10 microns MMAD.

10. The method of **Claim 9**, wherein the GLP-1 molecule has a particle size of about 1 to about 5 microns MMAD.

11. The method of **Claim 10**, wherein the GLP-1 molecule has a particle size of about 2 to about 3 microns MMAD.

12. The method of **Claim 1**, wherein at least about 10% of the GLP-1 molecule delivered is deposited in the lung.

13. The method of **Claim 1**, wherein the GLP-1 molecule is delivered from an inhalation device suitable for pulmonary administration and capable of depositing the GLP-1 molecule in the lungs of the patient.

14. The method of **Claim 13**, wherein the device is selected from the group consisting of a nebulizer, a metered-dose inhaler, a dry powder inhaler, and a sprayer.

15. The method of **Claim 14**, wherein the device is a dry powder inhaler.

16. The method of **Claim 1** wherein the GLP-1 molecule is selected from the group consisting of GLP-1 analogs and GLP-1 derivatives.

17. The method of **Claim 16** wherein the GLP-1 molecule is a GLP-1 analog.

18. The method of **Claim 17** wherein the GLP-1 analog is selected from the group consisting of Val^8-GLP-1(7-37)OH, Gly^8-GLP-1(7-37)OH, and Asp^8-GLP-1(7-37)OH.

19. The method of **Claim 18**, wherein the GLP-1 analog is Val^8-GLP-1(7-37)OH.

20. The method of **Claim 18**, wherein the GLP-1 analog is Gly^8-GLP-1(7-37)OH.

21. A method for treating diabetes comprising, administering an effective dose of a GLP-1 molecule to a patient in need thereof by pulmonary delivery.

22. The method of **Claim 21**, wherein the GLP-1 molecule is administered as a pharmaceutical formulation comprising the GLP-1 molecule in a pharmaceutically acceptable carrier.

23. The method of **Claim 21**, wherein the GLP-1 molecule is Val^8-GLP-1(7-37)OH.

24. The method of **Claim 21**, wherein the GLP-1 molecule is Gly^8-GLP-1(7-37)OH.

25. The method of **Claim 21**, wherein the GLP-1 molecule is delivered from an inhalation device suitable for pulmonary administration and capable of depositing the GLP-1 molecule in the lungs of the patient.

26. The method of **Claim 25**, wherein the device is a sprayer or a dry powder inhaler.

27. The method of **Claim 25**, wherein an actuation of the device administers about 40 µg to about 4,000 µg of a GLP-1 molecule.

28. The method of **Claim 25**, wherein an actuation of the device administers about 80 µg to about 2,000 µg of a GLP-1 molecule.

29. The method of **Claim 25**, wherein an actuation of the device administers about 160 µg to about 1,000 µg of a GLP-1 molecule.

30. The method of **Claim 25**, wherein an actuation of the device administers about 320 µg to about 500 µg of a GLP-1 molecule.

31. A method for treating hyperglycemia comprising, administering an effective dose of a GLP-1 molecule to a patient in need thereof by pulmonary means.

32. The method of **Claim 31**, wherein the GLP-1 molecule is administered as a pharmaceutical formulation comprising the GLP-1 molecule in a pharmaceutically acceptable carrier.

33. The method of **Claim 31**, wherein the GLP-1 molecule is Val^{8}-GLP-1(7-37)OH.

34. The method of **Claim 31**, wherein the GLP-1 molecule is Gly^8-GLP-1(7-37)OH.

35. The method of **Claim 31**, wherein the GLP-1 molecule is delivered from an inhalation device suitable for pulmonary administration and capable of depositing the GLP-1 molecule in the lungs of the patient.

36. The method of **Claim 35**, wherein the device is selected from the group consisting of a sprayer and a dry powder inhaler.

37. The method of **Claim 35**, wherein an actuation of the device administers about 40 µg to about 4,000 µg of GLP-1 molecule.

38. The method of **Claim 35**, wherein an actuation of the device administers about 80 µg to about 2,000 µg of the GLP-1 molecule.

39. The method of **Claim 35**, wherein an actuation of the device administers about 160 µg to about 1,000 µg of GLP-1 molecule.

40. The method of **Claim 35**, wherein an actuation of the device administers about 320 µg to about 500 µg of the GLP-1 molecule.